

What is claimed is:

1 1. Apparatus for adjusting firmness, support, or sag of a mattress, comprising:

2 a) a substantially convex cross-sectional shape that is thicker in the center  
3 region and gradually thinner toward the edges;

4 b) a material and constitution for maintaining the convex shape under the  
5 weight of the mattress and a person; and

6 c) a set of dimensions large enough to adjust firmness, support, or sag for  
7 the majority of an area of the mattress used by the person.

1 2. The apparatus of claim 1, wherein the apparatus comprises a substantially oval,  
2 elliptical, rectangular, diamond, rounded rectangular, rounded diamond, or  
3 rounded shape.

1 3. The apparatus of claim 1, wherein the apparatus is inflatable to achieve  
2 adjustability to the level of firmness, support, or sag.

1 4. The apparatus of claim 3, wherein baffles comprising a flexible material are  
2 attached inside the apparatus to both the top and the bottom thereof,  
3 preventing the further expansion of the apparatus at those points, with  
4 shorter pieces of said flexible material located toward the edges to keep the  
5 edges thinner, and with longer pieces of said flexible material located in the  
6 center areas to allow the center areas to expand thicker when inflated.

1 5. The apparatus of claim 3, wherein a plurality of hollow chambers inside the  
2 apparatus are attached to both the top and the bottom thereof, preventing  
3 the further expansion of the apparatus at those points, with shorter hollow  
4 chambers comprising a flexible material located toward the edges to keep  
5 the edges thinner, and with longer hollow chambers comprising a flexible  
6 material located in the center areas to allow the center areas to expand  
7 thicker when inflated.

1 6. The apparatus of claim 3, wherein separate inflatable chambers of varying  
2 diameters are connected in such a way to form the convex shape, wherein  
3 chambers having a larger diameter are arranged near a center of said  
4 apparatus, and progressively smaller diameter chambers being arranged  
5 toward the edge thereof.

1 7. An apparatus for adding adjustability of firmness, support, or sag to a mattress,  
2 comprising:

3 a) a plurality of inflatable chambers;

4 b) a substantially convex cross-sectional shape, after inflation, that is  
5 thicker in the center region and gradually tapered toward the edges;

6 c) an arrangement and shape of the chambers for maintaining the convex  
7 shape under the weight of the mattress and a person;

8 d) a set of dimensions large enough to adjust firmness, support, or sag for  
9 the majority of an area of the mattress used by the person; and

10 e) an adjustability of firmness, support, or sag controlled by degree of  
11 inflation of said chambers.

1 8. The apparatus of claim 7, wherein the plurality of chambers are inflatable by  
2 way of at least one inflation opening.

1 9. The apparatus of claim 7, wherein the plurality of chambers are separate, with  
2 each chamber inflatable by way of a separate inflation opening.

1 10. The apparatus of claim 7, wherein baffles comprising a flexible material are  
2 attached inside the apparatus to both the top and the bottom thereof,  
3 preventing the further expansion of the apparatus at those points, with  
4 shorter pieces of said flexible material located toward the edges to keep the  
5 edges thinner, and with longer pieces of said flexible material located in the  
6 center areas to allow the center areas to expand thicker when inflated.

1 11. The apparatus of claim 7, wherein a plurality of hollow chambers inside the  
2 apparatus are attached to both the top and the bottom thereof, preventing  
3 the further expansion of the apparatus at those points, with shorter hollow  
4 chambers comprising a flexible material located toward the edges to keep  
5 the edges thinner, and with longer hollow chambers comprising a flexible  
6 material located in the center areas to allow the center areas to expand  
7 thicker when inflated.

1 12. The apparatus of claim 7, wherein separate inflatable chambers of varying  
2 diameters are connected in such a way to form the convex shape, wherein  
3 chambers having a larger diameter are arranged near a center of said  
4 apparatus, and progressively smaller diameter chambers being arranged  
5 toward the edge thereof.

1 13. A method of providing adjustability of firmness, support, or sag to a mattress  
2 comprising the steps of:

- 3 a) providing an inflatable apparatus and inflating it so that it attains a  
4 substantially convex shape;
- 5 b) inflating the apparatus to a desired degree for a desired level of firmness,  
6 support, or sag to the mattress;
- 7 c) placing the apparatus under the mattress; and
- 8 d) positioning the apparatus so that it supports the majority of an area of the  
9 mattress used by a person.

1 14. The method of claim 13, wherein the apparatus is placed between a mattress  
2 and a box spring.

1 15. The method of claim 13, wherein the mattress is a king-size mattress.

1 16. The method of claim 13, wherein the mattress is a queen-size mattress.

1 17. The method of claim 13, wherein the mattress is a double-size mattress.

1      18. The method of claim 13, wherein the mattress is a twin-size mattress.